

In response to the October 3, 2002 Office Action,
please amend the above-identified application as follows:

IN THE CLAIMS:

Kindly rewrite Claims 1, 3-9, 12, 13, 15-17, 22, 23,
28, 30-32, 37-39, 52-54, 58, 60-62 and 65 as follows:

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1. (Once amended) A foamed isocyanate-based polymer derived from a reaction mixture comprising an isocyanate, an active hydrogen-containing compound, a dendritic macromolecule and a blowing agent; wherein a mixture comprising at least about 15% by weight of the dendritic macromolecule and a polyether polyol having an OH number less than about 40 mg KOH/g forms a stable liquid at 23°C.

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3. (Once amended) The foamed isocyanate-based polymer defined in claim 2, wherein the active hydrogen-containing compound confers to the cellular matrix a load efficiency in the range of from about 15 to about 50 Newtons/weight % active hydrogen-containing compound.

4. (Once amended) The foamed isocyanate-based polymer defined in claim 2, wherein the active hydrogen-containing compound confers to the cellular matrix a load efficiency in the range of from about 20 to about 45 Newtons/weight % active hydrogen-containing compound.

5. (Once amended) The foamed isocyanate-based polymer defined in claim 2, wherein the active hydrogen-containing compound confers to the cellular matrix a load efficiency in the range of from about 25 to about 35 Newtons/weight % active hydrogen-containing compound.

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6. (Once amended) A foamed isocyanate-based polymer having a cellular matrix derived from an active hydrogen-containing compound and comprising a plurality of interconnected struts, the cellular matrix: (i) having a load efficiency of at least about 15 Newtons/weight % active hydrogen-containing compound, and (ii) being substantially free of particulate material.

7. (Once amended) The foamed isocyanate-based polymer defined in claim 6, wherein the active hydrogen-containing compound confers to the cellular matrix a load efficiency in the

range of from about 15 to about 50 Newtons/weight % active hydrogen-containing compound.

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8. (Once amended) The foamed isocyanate-based polymer defined in claim 6, wherein the active hydrogen-containing compound confers to the cellular matrix a load efficiency in the range of from about 20 to about 45 Newtons/weight % active hydrogen-containing compound.

9. (Once amended) The foamed isocyanate-based polymer defined in claim 6, wherein the active hydrogen-containing compound confers to the cellular matrix a load efficiency in the range of from about 25 to about 35 Newtons/weight % active hydrogen-containing compound.

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12. (Once amended) A process for producing a foamed isocyanate-based polymer comprising the steps of:

contacting an isocyanate, an active hydrogen-containing compound, a dendritic macromolecule and a blowing agent to form a reaction mixture; and

expanding the reaction mixture to produce the foamed isocyanate-based polymer;

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wherein a mixture comprising at least about 15% by weight of the dendritic macromolecule and a polyether polyol having an OH number less than about 40 mg KOH/g forms a stable liquid at 23°C.

13. (Once amended) The process defined in claim 12, wherein the active hydrogen-containing compound is selected from the group consisting of polyols, polyamines, polyamides, polyimines and polyolamines.

15. (Once amended) The process defined in claim 14, wherein the polyol comprises a hydroxyl-terminated backbone of a member selected from the group consisting of polyether, polyesters, polycarbonate, polydiene and polycaprolactone.

16. (Once amended) The process defined in claim 14, wherein the polyol is selected from the group consisting of hydroxyl-terminated polyhydrocarbons, hydroxyl-terminated polyformals, fatty acid triglycerides, hydroxyl-terminated polyesters, hydroxymethyl-terminated polyesters, hydroxymethyl-terminated perfluoromethylenes, polyalkyleneether glycols, polyalkylenearyleneether glycols, polyalkyleneether triols and mixtures thereof.

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17. (Once amended) The process defined in claim 14, wherein the polyol is selected from the group consisting of adipic acid-ethylene glycol polyester, poly(butylene glycol), poly(propylene glycol) and hydroxyl-terminated polybutadiene.

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22. (Once amended) The process defined in claim 12, wherein the active hydrogen-containing compound is selected from group consisting of a polyamine and a polyalkanolamine.

23. (Once amended) The process defined in claim 22, wherein the polyamine is selected from the group consisting of primary and secondary amine terminated polyethers.

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28. (Once amended) The process defined in claim 12, wherein the isocyanate is selected from the group consisting of hexamethylene diisocyanate, 1,8-diisocyanato-p-methane, xylyl diisocyanate, $(OCNCH_2CH_2CH_2OCH_2O)_2$, 1-methyl-2,4-diisocyanatocyclohexane, phenylene diisocyanates, tolylene diisocyanates, chlorophenylene diisocyanates, diphenylmethane-4,4-diisocyanate, naphthalene-1,5-diisocyanate, triphenylmethane-4,4,4-triisocyanate, isopropylbenzene-alpha-4-diisocyanate and mixtures thereof.

30. (Once amended) The process defined in claim 12, wherein isocyanate is selected from the group consisting of 1,6-hexamethylene diisocyanate, 1,4-butylene diisocyanate, furfurylidene diisocyanate, 2,4-toluene diisocyanate, 2,6-toluene diisocyanate, 2,4-diphenylmethane diisocyanate, 4,4-diphenylmethane diisocyanate, 4,4-diphenylpropane diisocyanate, 4,4-diphenyl-3,3-dimethyl methane diisocyanate, 1,5-naphthalene diisocyanate, 1-methyl-2,4-diisocyanate-5-chlorobenzene, 2,4-diisocyanato-s-triazine, 1-methyl-2,4-diisocyanatocyclohexane, p-phenylene diisocyanate, m-phenylene diisocyanate, 1,4-naphthalene diisocyanate, dianisidine diisocyanate, bitolylen diisocyanate, 1,4-xylylene diisocyanate, 1,3-xylylene diisocyanate, bis-(4-isocyanatophenyl)methane, bis-(3-methyl-4-isocyanatophenyl)methane, polymethylene polyphenyl polyisocyanates and mixtures thereof.

31. (Once amended) The process defined in claim 12, wherein the isocyanate is selected from the group consisting of 2,4-toluene diisocyanate, 2,6-toluene diisocyanate and mixtures thereof.

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32. (Once amended) The process defined in claim 12, wherein the isocyanate is selected from the group consisting of (i) 2,4 -diphenylmethane diisocyanate, 4,4 -diphenylmethane diisocyanate and mixtures thereof; and (ii) mixtures of (i) with an isocyanate selected from the group comprising 2,4-toluene diisocyanate, 2,6-toluene diisocyanate and mixtures thereof.

37. (Once amended) The process defined in claim 36, wherein a mixture comprising from about 15% to about 30% by weight of the dendritic macromolecule and a polyether polyol having an OH number less than about 40 mg KOH/g forms a stable liquid at 23°C.

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38. (Once amended) The process defined in claim 36, wherein a mixture comprising at least about 15% by weight of the dendritic macromolecule and a polyether polyol having an OH number in the range of from about 25 to 35 mg KOH/g forms a stable liquid at 23°C.

39. (Once amended) The process defined in claim 36, wherein a mixture comprising at least about 15% by weight of the dendritic macromolecule and a polyether polyol having an OH

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number in the range of from about 28 to 32 mg KOH/g forms a stable liquid at 23°C.

52. (Once amended) The process defined in claim 36, wherein a mixture comprising from about 15% to about 50% by weight of the dendritic macromolecule and a polyether polyol having an OH number less than about 40 mg KOH/g forms a stable liquid at 23°C.

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53. (Once amended) The process defined in claim 36, wherein a mixture comprising from about 15% to about 40% by weight of the dendritic macromolecule and a polyether polyol having an OH number less than about 40 mg KOH/g forms a stable liquid at 23°C.

54. (Once amended) The process defined in claim 36, wherein the macromolecule has an inherently branched structure consisting of at least one of an ester moiety, an ether moiety, an amine moiety, an amide moiety and any mixtures thereof.

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58. (Once amended) The process defined in claim 54, wherein the macromolecule further consists of a nucleus to which the inherently branched structure is chemically bonded.

60. (Once amended) The process defined in claim 54, wherein the inherently branched structure has at least one chain stopper moiety chemically bonded thereto.

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61. (Once amended) The process defined in claim 54, wherein the inherently branched structure has at least two different chain stopper moieties chemically bonded thereto.

62. (Once amended) The process defined in claim 54, wherein the inherently branched structure has at least one spacing chain extender chemically bonded thereto.

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65. (Once amended) A process for conferring hardness to a foamed isocyanate-based polymer derived from a mixture comprising an isocyanate, an active hydrogen-containing compound and a blowing agent, the process comprising the step of incorporating a dendritic macromolecule in the reaction mixture;

wherein a mixture of at least about 15% by weight of the dendritic macromolecule and a polyether polyol having an OH number less than about 40 mg KOH/g forms a stable liquid at 23°C.